

Abstract :

The present invention relates to block copolymers for applications in medicine and biotechnology and synthesis thereof. Block copolymers comprise polyvalent *N*-
5 Acetyl Glucosamine (NAG) which bind more efficiently to lysozyme than NAG itself. The effective inhibition is possible even at very low ligand concentrations than reported earlier. The block copolymers could be used for prevention and treatment of bacterial and viral infections. Moreover these polymers can be stimuli sensitive and be used for the recovery of biomolecules. The methodology of
10 preparation of block copolymers reported here can be extended to other polymers and ligands such as sialic acid and used for preventing influenza and / or rotavirus infections. It also provides a method for preparation of block copolymers wherein polymers comprising sequences of specific ligands are essential.

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